



NATIONAL PARK SERVICE ENVIROFACTS

3/3/99

National Park Service
Hazardous Waste Management &
Pollution Prevention Team
Washington DC 20240
(202)565-1240(x3)

SPENT SOLVENT MANAGEMENT

DEFINITIONS

Spent solvents: These are typically one of the largest single hazardous waste streams generated by park maintenance facilities. Examples of spent solvents include mineral spirits, chlorinated solvent, paint related waste, and alcohol that is no longer useful. A spent solvent is hazardous if it meets **ignitability** or **toxicity** characteristics, or meets the definition of a **listed waste**.

APPLICABLE STANDARDS

Federal: Resource Conservation and Recovery Act (RCRA) large quantity generators (LQGs), small quantity generators (SQGs), and conditionally exempt SQGs (CESQGs) who generate a spent solvent that meets the definition of a hazardous waste must manage the material in accordance with applicable provisions of 40 CFR 261-266, 268 and 270.

State: State hazardous waste and spent solvent regulations may be more stringent than the federal standard. The requirements for your state must be reviewed to thoroughly assess compliance status.

Other: Additional federal and state standards may apply to the storage and transport of spent solvent at your park.

HANDLING

Handling this waste material may require special precautions such as personal protective equipment (PPE) and special procedure to prevent injury. Always remember to consult with your Park or Regional Safety Officer for additional information concerning proper handling. Although regulatory handling requirements vary based on generator status, the following practices should be adhered to by all parks.

Labeling: All containers of spent solvent hazardous waste should be labeled with the words "Hazardous Waste" in large readable letters. The label should also indicate what type of spent solvent is present in the container. It is a good practice to place an National Fire Protection Association (NFPA) hazard label on the container.

Container Management: Containers used to store hazardous waste must be in good condition and free of leaks. Containers should be compatible with the stored material.

Containers should be sealed during storage and only stored next to compatible materials.

STORAGE

LQG hazardous waste accumulation areas must have secondary containment. It is recommended that SQGs and CESQGs also provide secondary containment for hazardous waste storage.

RECYCLING/DISPOSAL

It is recommended that parks recycle as much spent solvent as possible by sending it to a reclamation facility. Reclamation facilities regenerate the spent solvent to produce a usable product. The next preferable option is to send the spent solvent to a facility that uses the material for energy recovery. Both of these options often require careful segregation of each waste stream.



All hazardous waste spent solvent must be properly manifested and shipped by a permitted hazardous waste transporter. Almost all solvents also require a Land Disposal Restriction (LDR) notification.

SPECIAL TOPICS

Characterization

All parks that generate spent solvent must determine if the waste is hazardous (40 CFR 262.11). To determine if spent solvent is a hazardous waste you will typically need to answer the following questions:

- **Ignitability:** Does the solvent have a flash point below 140 °F? If the answer is yes, the spent solvent must be managed as a hazardous waste. This information is available on the MSDS provided by the solvent manufacturer or distributor (40 CFR 261).
- **Toxicity Characteristic:** Does the material fail the Toxicity Characteristic Leaching Procedure (TCLP) test for toxicity? If the material contains any organic or inorganic chemicals in excess of the concentrations listed under 40 CFR 261.24, the material must be managed as a hazardous waste.
- **Listed:** Is the spent solvent or any of its constituents listed in 40 CFR 261.31?

This rule defines hazardous waste from non-specific sources. Spent solvents are listed in categories F001, F002, F003, F004, and F005.

Recordkeeping

The park is responsible for maintaining all files associated with the characterization of solvent wastes, inspection of storage areas, accumulation of hazardous waste, and documentation of disposal activities.

Spills Response

Parks that generate hazardous waste must maintain and operate the hazardous waste storage areas to minimize the possibility of a fire, explosion, or any unplanned release of hazardous waste and meet certain requirements for preparedness and prevention (40 CFR 262.34(a)(4) and 40 CFR 265.30-265.37). Parks that are LQGs must also have a written Contingency Plan (40 CFR 262.34(a)).

Parks should respond to solvent spills with trained personnel. Response activities should consist of containing the flow to the maximum extent possible and cleaning up resulting waste and contaminated material or soil. If a spill threatens human health or the environment outside the site it should be reported to the National Response Center (800/424-8802).

POLLUTION PREVENTION

The parks should consider substitutes to traditional solvents that result in less hazardous waste generation such as many alkaline or naturally derived citric-based cleaners (e.g., d-limonene). Another alternative is using a hot water parts cleaners with a high pressure water detergent spray for degreasing.

Two-step cleaning processes that includes pre-cleaning and final-cleaning systems can also decrease solvent waste. All solvents should be recirculated and passed through high efficiency filtering devices to extend use.

ENVIROFACTS X-REFERENCES

- Environmental Training
- Hazard Communication
- Hazardous Waste Characterization

SPENT SOLVENT MANAGEMENT CHECKLIST

| Checklist Item | Notes |
|--|-------|
| 1. Review all of spent solvent waste streams and ensure that every effort is made to send the material to a facility that reclaims the spent solvent. The next alternative is to send the material to a facility that blends the spent solvent with other potential fuels and burns the resultant mixture for energy recovery. | |
| 2. Inspect all of the containers storing spent solvent and confirm that each is properly labeled and in good condition. Each container should have a "hazardous waste" label clearly displayed on it. The contents of each container should also be noted on the label. | |
| 3. Review several of the MSDSs for solvents used and compare the constituents listed with the waste profile established for that waste stream. Confirm that the waste stream is properly characterized. | |
| 4. Determine if Land Disposal Restriction notifications are required for each of spent solvent waste stream and ensure that they are being completed with each waste shipment. | |
| 5. Confirm that spill response kits are being stored near spent solvent waste storage areas. The kits should be equipped with compatible materials necessary to respond to a solvent spill. | |
| 6. Determine if all solvent cleaning units are equipped with high efficiency filtering devices to extend product use. | |
| 7. Investigate the feasibility of replacing existing stoddard solvent units with either a limonene based unit or a hot water high pressure parts washing unit. | |
| 8. Confirm that each waste solvent stream is being properly segregated for disposal. | |